

## NEVADA BUTTERFLIES: PRELIMINARY CHECKLIST AND DISTRIBUTION

GEORGE T. AUSTIN

Nevada State Museum and Historical Society, 700 Twin Lakes Drive,  
Las Vegas, Nevada 89107

**ABSTRACT.** The distribution by county of the 189 species (over 300 taxa) of butterflies occurring in Nevada is presented along with a list of species incorrectly recorded for the state. There are still large areas which are poorly or not collected.

Nevada continues as one of the remaining unknown areas in our knowledge of butterfly distribution in North America. Although a comprehensive work on the state's butterflies is in preparation, there is sufficient demand for a preliminary checklist to justify the following. It is hoped this will stimulate those who have any data on Nevada butterflies and their biology to forward such for inclusion in the larger study.

Studies of Nevada butterflies are hampered by a paucity of resident collectors, a large number of mountain and valley systems and vast areas with little or no access. Non-resident collectors usually funnel into known and well worked areas, and, although their data are valuable, large areas of the state remain uncollected. Intensive collecting, with emphasis on poorly known areas, over the past seven years by Nevada State Museum personnel and associates has gone far to clarify butterfly distribution within the state. The gaps in knowledge are now more narrowly identifiable and will be filled during the next few seasons.

There is no all encompassing treatment of Nevada's butterfly fauna. The only state list is an informal recent checklist of species (Harjes, 1980). Regional works are those for the Carson Range (Herlan, 1962) and Clark County (Austin & Austin, 1980). Many records for the eastern, approximately one-third, of the state are mapped by Stanford (*in Ferris & Brown, 1981*). Otherwise, published Nevada records occur scattered in various taxonomic revisions, life history and distribution studies and in the season summaries of the Lepidopterists' Society.

Data for the present paper were obtained from the following sources:

- (1) Collection of the Nevada State Museum (NSM), Carson City.
- (2) Private collections of G. T. Austin, Las Vegas; J. F. Leser, formerly of Las Vegas; C. S. Lawson, Las Vegas; C. Crunden, Las Vegas; S. D. Mattoon, Chico, California and C. Hageman, Yuba City, California.
- (3) Collection of the Los Angeles County Museum (Clark Co. material only).
- (4) Collection of the Lake Mead National Recreation Area, Boulder City (in part).
- (5) Collection of the Department of Biological Sciences, University of Nevada, Las Vegas.

- (6) Collection of the Department of Biology, University of Nevada, Reno.
- (7) Ongoing collections for a Great Basin biogeographic study directed by P. Ehrlich, Stanford University, Stanford, California.
- (8) Data supplied by various non-resident collectors (see acknowledgments, some of whose specimens have been examined; also included are some second-hand data, many of which were kindly supplied by R. E. Stanford).
- (9) Data from literature sources (including those in the season summaries of the Lepidopterists' Society, most have been subsequently verified through correspondence).

It is hoped that most important specimens will be examined before publication of the larger work.

Presentation of distributional data for Nevada in a simplified, yet meaningful, manner is difficult. Counties, with few exceptions, are huge; some reach asinine proportions when trying to consider distribution. The worst, Nye County, extends nearly half the length and breadth of the state from hot Mojave Desert to alpine conditions in the Toiyabe Mountains. For present purposes, Nye County is divided into two sections at 38° latitude and the northern and southern portions herein designated as Nye N and Nye S, respectively. This essentially divides the county between the Great Basin and Mojave deserts. Other counties (e.g., Washoe, Elko) also create problems but are not subdivided here. Carson City was previously Ormsby County. Figure 1 illustrates the counties, and Table 1 indicates the number of taxa recorded in each.

Nomenclature generally follows Howe (1975; see Ehrlich & Murphy, 1981) at the generic level and Miller and Brown (1981) at the specific. All taxonomic decisions are the author's, although in some cases they were arrived at after consultation with other, more knowledgeable, students of the particular taxon. Generally accepted nomenclature is presented without comment. In cases where my concepts run counter to those in the literature, brief justification is presented. Manuscripts in preparation will amplify and further justify these decisions. A question mark indicates that reported specimens were not examined and questionable or that the sample was too small for definite subspecific determination.

In an area as large as Nevada, it is expected that there are a number of blend zones between populations of different subspecies. This is, in fact, the case. In a checklist of this type, however, it is out of place to discuss these. The various populations are herein "pigeon-holed" into their "best fit" to available names, and a more thorough discussion will await forthcoming papers.

## COUNTY RECORDS OF NEVADA BUTTERFLIES

### HESPERIIDAE

1. *Epargyreus clarus huachuca* Dixon—Clark.
2. *Polygonus leo arizonensis* (Skinner)—Clark, Elko, Lander, Nye N, Nye S.

3. *Thorybes pylades* (Scudder)—Carson City, Clark, Douglas, Washoe.
- 4a. *Thorybes mexicana nevada* Scudder—Carson City, Douglas, Washoe.
- 4b. *Thorybes mexicana blanca* Scott—Lyon, Mineral(?). This taxon was recently described (Scott, 1981).
5. *Systasea zampa* (W. H. Edwards)—Clark.
6. *Chiomara asychis georgina* (Reakirt)—Clark.
7. *Erynnis icelus* (Scudder & Burgess)—Carson City, Elko, Lander, Nye N, Washoe, White Pine.
8. *Erynnis brizo burgessi* (Skinner)—Clark, Lincoln.
9. *Erynnis telemachus* Burns—Clark, Lincoln, White Pine.
10. *Erynnis propertius* (Scudder & Burgess)—Carson City, Douglas, Washoe.
11. *Erynnis meridianus meridianus* Bell—Clark, Lincoln.
12. *Erynnis pacuvius lilius* (Dyar)—Carson City, Douglas, Lyon, Washoe.
13. *Erynnis funeralis* (Scudder & Burgess)—Clark, Nye S.
14. *Erynnis persius* (Scudder)—Carson City, Douglas, Elko, Eureka, Humboldt(?), Lander, Nye N, Washoe, White Pine. Burns (1964) presented a valid argument for not recognizing subspecies at our present state of knowledge.
15. *Pyrgus ruralis ruralis* (Boisduval)—Douglas, Washoe.
16. *Pyrgus scriptura* (Boisduval)—Clark, Lincoln, Nye N, Nye S, White Pine.
- 17a. *Pyrgus communis communis* (Grote)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
- 17b. *Pyrgus communis albescens* Plötz—Carson City, Clark, Esmeralda, Lincoln, Nye N, Nye S. This and the preceding are tentatively considered conspecific based mainly on the existence of intermediate populations (Tilden, 1965).
18. *Heliopetes domicella domicella* (Erichson)—Clark.
19. *Heliopetes ericetorum* (Boisduval)—Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, White Pine.
20. *Pholisora catullus* (Fabricius)—Carson City, Douglas, Elko, Lander, Lincoln, Lyon, Nye N, Storey, Washoe.
- 21a. *Pholisora libya libya* (Scudder)—Clark, Lincoln, Nye S, White Pine.
- 21b. *Pholisora libya lena* (W. H. Edwards)—Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Nye S, Pershing, Washoe.
22. *Pholisora alpheus oricus* W. H. Edwards—Churchill, Clark, Douglas, Esmeralda, Humboldt, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Washoe.
23. *Pholisora graciellae* MacNeill—Clark.
24. *Copaeades aurantiaca* (Hewitson)—Clark, Lincoln.
25. *Hylephila phyleus muertovalle* Scott—Carson City, Churchill, Clark, Elko, Lincoln, Nye S. This was recently named by Scott (1981).
- 26a. *Pseudocopaeades eunus* nr. *wrightii* (W. H. Edwards)—Churchill, Lyon, Washoe.
- 26b. *Pseudocopaeades eunus alinea* Scott—Nye S. The Amargosa population is distinct from others in the state and appears closest to this recently described taxon (Scott, 1981).
- 26c. *Pseudocopaeades eunus* nr. *eunus* (W. H. Edwards)—Carson City. The Eagle Valley population is distinct from others in Nevada and may be worthy of a name.
- 27a. *Hesperia uncas lasus* (W. H. Edwards)—Elko, Lander, Lincoln, Lyon, Nye N, White Pine.
- 27b. *Hesperia uncas macswaini* MacNeill—Douglas, Esmeralda, Lyon, Mineral, Washoe.
- 27c. *Hesperia uncas* W. H. Edwards ssp.—Elko, Eureka, Lander, Nye N, White Pine. This is the large, bright (vs. pale *lasus*) phenotype of the central Great Basin mountains.
- 27d. *Hesperia uncas* W. H. Edwards ssp.—Mineral. This insect is small and occurs at relatively low elevations in extreme western Nevada and adjacent California.
28. *Hesperia juba* (Scudder)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

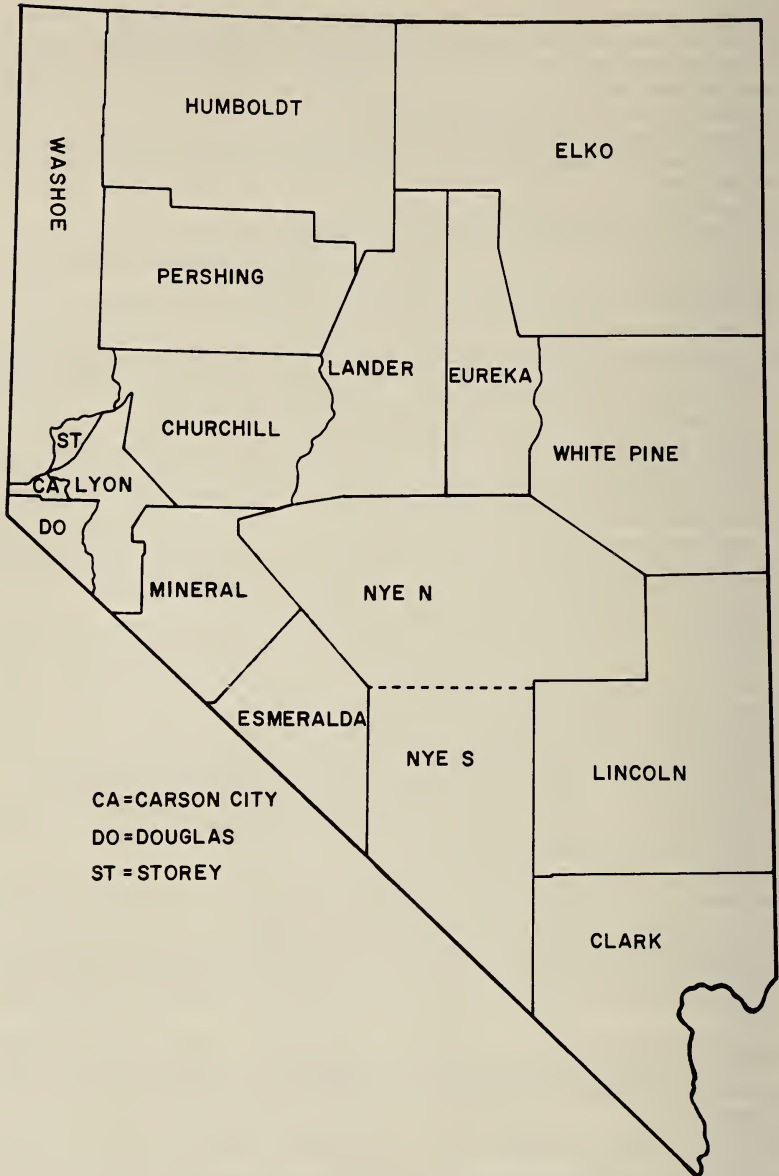


FIG. 1. Map of Nevada showing counties (dashed line shows division between northern and southern Nye County as used herein).

TABLE 1. Distribution of number of butterfly taxa recorded in each county of Nevada.

County	Number of species	Number of taxa
Carson City	106	114
Churchill	76	79
Clark	121	132
Douglas	110	119
Elko	111	127
Esmeralda	80	87
Eureka	85	89
Humboldt	84	96
Lander	96	106
Lincoln	110	119
Lyon	93	100
Mineral	90	94
Nye	116	145
Nye N	103	119
Nye S	67	76
Pershing	74	76
Storey	73	75
Washoe	117	130
White Pine	105	115
State	189	308

- 29a. *Hesperia comma harpalus* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Storey, Pershing, Washoe, White Pine. Nevada material has been referred to the synonymous *idaho* (W. H. Edwards) and *cabelus* (W. H. Edwards).
- 29b. *Hesperia comma* (Linnaeus) spp.—Clark, Nye S. The Spring Range population is distinct from any other known population.
30. *Hesperia pahaska martini* MacNeill—Clark, Lincoln.
31. *Hesperia lindseyi* (Holland)—Washoe.
32. *Hesperia miriamae* MacNeill ssp.—Esmeralda. The White Mountains population is distinct from those in the Sierra Nevada.
- 33a. *Hesperia nevada nevada* (Scudder)—Elko.
- 33b. *Hesperia nevada* (Scudder) ssp.—Carson City, Clark, Douglas, Lyon, Mineral, Storey, Washoe. The Sierra Nevada populations are separable from the more eastern ones as previously suggested (MacNeill, 1964).
- 34a. *Polites sabuleti sabuleti* (Boisduval)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe. The name *genoa* (Plötz), described from Nevada, is synonymous.
- 34b. *Polites sabuleti tecumseh* (Grinnell)—Carson City, Douglas, Washoe.
- 34c. *Polites sabuleti chusca* (W. H. Edwards)—Clark, Lincoln, Nye S.
- 34d. *Polites sabuleti* (Boisduval) ssp.—Eureka, Lander, Nye N, White Pine. These very pallid populations are unlike any others in the state.
- 34e. *Polites sabuleti* (Boisduval) ssp.—Esmeralda. A distinctive high elevation race occurs in the White Mountains.
- 34f. *Polites sabuleti* (Boisduval) ssp.—Elko, Lincoln, White Pine. A blackish phenotype in eastern Nevada is very distinctive.
35. *Polites draco* (W. H. Edwards)—Clark.
- 36a. *Polites sonora sonora* (Scudder)—Carson City, Douglas, Esmeralda, Lyon, Mineral, Storey, Washoe.

- 36b. *Polites sonora utahensis* (Skinner)—Humboldt.  
 37. *Atalopedes campestris campestris* (Boisduval)—Clark, Lincoln, Nye S.  
 38a. *Ochlodes sylvanoides sylvanoides* (Boisduval)—Carson City, Churchill, Douglas, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Storey, Washoe, White Pine. These populations may eventually be shown to be distinct enough to warrant recognition as different from California populations (*vide* J. F. Emmel).  
 38b. *Ochlodes sylvanoides bonnevilla* Scott—Elko, Eureka, Humboldt, Lander, Pershing, White Pine. This pallid taxon was described by Scott (1981).  
 39. *Ochlodes yuma* (W. H. Edwards)—Clark, Elko, Esmeralda, Humboldt, Lander, Lincoln, Mineral, Nye N, Nye S, Pershing, Washoe.  
 40. *Euphyes vestris vestris* (Boisduval)—Washoe. The name *ruricola* (Boisduval) apparently applies to another taxon (*vide* J. F. Emmel).  
 41. *Atrytonopsis python* (W. H. Edwards)—Clark.  
 42. *Lerodea eufala* (W. H. Edwards)—Clark, Lincoln, Nye S.  
 43. *Capodes ethlius* (Stoll)—Clark.  
 44. *Agathymus alliae* (D. Stallings & Turner) ssp.—Clark, Lincoln. Material represents an unnamed eastern Mojave Desert population.  
 45a. *Megathymus coloradensis maudae* D. Stallings, Turner & J. Stallings—Clark, Esmeralda, Lincoln, Nye S. These were referred to as *navaajo* Skinner in Austin and Austin (1980).  
 45b. *Megathymus coloradensis browni* D. Stallings & Turner—White Pine.

## PAPILIONIDAE

46. *Parnassius clodius baldur* W. H. Edwards—Washoe. This was originally reported as *altaurus* Dyer (1967, Lepid. Soc. Season Summary).  
 47. *Parnassius phoebus sayii* W. H. Edwards—Elko. The synonym *rubina* Wyatt was based on Nevada material.  
 48. *Battus philenor philenor* (Linnaeus)—Clark, Lincoln.  
 49. *Papilio polyxenes coloro* W. G. Wright—Clark, Lincoln, Nye S. The use of this combination follows Ferris and Emmel (1982); *rudkini* F. & R. Chermock is thus synonymous.  
 50. *Papilio bairdii* W. H. Edwards—Clark, Esmeralda, Lander, Lincoln, Nye N, White Pine.  
 51. *Papilio oregonius oregonius* W. H. Edwards—Elko. This may be a *bairdii* subspecies.  
 52. *Papilio zelicaon nitra* W. H. Edwards—Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Nye N, Pershing, Storey, Washoe, White Pine. Nevada populations are closer to this rather than California *zelicaon* Lucas (see Fisher, 1977). The form "gothica" Remington has been suggested as occurring in the state (e.g., Emmel in Howe, 1975).  
 53a. *Papilio indra indra* Reakirt—Carson City, Douglas, Lyon.  
 53b. *Papilio indra panamintinus* J. Emmel—Clark, Lincoln(?), Nye N(?). Placement here is tentative pending further study (*vide* J. F. Emmel). This subspecies was recently described (Emmel, 1981).  
 53c. *Papilio indra nevadensis* T. & J. Emmel—Elko, Esmeralda, Lander, Mineral, Nye N, Pershing, White Pine. Material from Esmeralda and Mineral counties is intermediate towards *panamintinus*.  
 53d. *Papilio indra* Reakirt ssp.—Clark. The populations in the Sheep and certain other Clark County mountains are unlike that in the Spring Mountains.  
 54a. *Papilio rutulus rutulus* Lucas—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. The taxon *ammoni* Behrens, described from Nevada, appears unrecognizable as a subspecies.  
 54b. *Papilio rutulus arizonensis* W. H. Edwards—Clark. The Spring Mountains population is different from those in the rest of the state and comes closest to this weakly defined race.  
 55. *Papilio multicaudata* W. F. Kirby—Carson City, Churchill, Clark, Douglas, Elko,

Eureka, Humboldt, Lander, Lincoln, Lyon, Nye N, Pershing, Storey, Washoe, White Pine.

56. *Papilio eurymedon* Lucas—Carson City, Douglas, Elko, Humboldt, Storey, Washoe, White Pine.

## PIERIDAE

- 57a. *Neophasia menapia menapia* (C. & R. Felder)—Carson City, Douglas, Humboldt, Lyon, Mineral, Washoe.

57b. *Neophasia menapia* (C. & R. Felder) ssp.—Churchill, Clark, Elko, Eureka, Lander, Lincoln, Nye N, White Pine. Central and eastern Nevada material differs consistently from that from the Sierra Nevada and warrants recognition.

58. *Pieris beckerii* W. H. Edwards—Carson City, Clark, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

59a. *Pieris sisymbrii elivata* Barnes & Benjamin—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe. These were called nominate *sisymbrii* by Edwards (1884) before the description of *elivata*.

59b. *Pieris sisymbrii* Boisduval ssp.—Clark, Lincoln, Nye N, Nye S, White Pine. Southern Nevada material is consistently distinguishable from that of the Rocky Mountains and most of the Great Basin.

60. *Pieris protodice* Boisduval & Leconte—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

61. *Pieris occidentalis occidentalis* Reakirt—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.

62. *Pieris napi pallidissima* Barnes & McDunnough—Elko, White Pine. I prefer to recognize *pallidissima* as distinct from Rocky Mountain *macdunnoughi* Remington.

63. *Pieris rapae rapae* (Linnaeus)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

64. *Euchloe ausonides ausonides* (Lucas)—Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. These may be distinct enough from the nominate to require a new name (*vide* J. F. Emmel).

65a. *Euchloe hyantis lotta* Beutenmüller—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

65b. *Euchloe hyantis* (W. H. Edwards) ssp.—Carson City, Douglas. This is the Sierra Nevada segregate after Opler (1968).

66a. *Anthocharis cethura* C. & R. Felder ssp.—Churchill, Esmeralda, Lyon, Mineral, Nye S, Pershing, Washoe. The names *caliente* W. G. Wright and *morrisoni* W. H. Edwards have been attributed to the Nevada fauna (1967 and 1974 Lepid. Soc. Season Summaries). The former appears strictly synonymous with nominate *cethura*; the latter is probably distinct but does not occur in the state. Typical *cethura* is restricted to southern California; Great Basin material requires a name (*vide* J. F. Emmel).

66b. *Anthocharis cethura* nr. *pima* W. H. Edwards—Clark, Lincoln, Nye S. I consider *pima* as conspecific with *cethura* on the basis of apparent intermediate populations. The Mojave Desert populations are not like southern Arizona *pima*.

67a. *Anthocharis sara thoosa* (Scudder)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.

67b. *Anthocharis sara browningi* Skinner—Elko, Humboldt.

67c. *Anthocharis sara stella* W. H. Edwards—Carson City, Douglas, Washoe.

68. *Anthocharis lanceolata lanceolata* Lucas—Carson City, Douglas, Washoe.

69. *Colias philodice eriphyle* W. H. Edwards—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine. This was referred to nominate *philodice* Godart by Austin and Austin (1980).
70. *Colias eurytheme* Boisduval—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
71. *Colias alexandra edwardsii* W. H. Edwards—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine. Some males from most populations have orange discal spots on the secondaries and probably represent intergrades towards *astraea* W. H. Edwards (see Ferris, 1973). The name *emilia* W. H. Edwards attributed to the state is synonymous.
72. *Colias cesonia cesonia* (Stoll)—Clark, Esmeralda, Lander, Lincoln, Lyon, Mineral, Nye N, White Pine.
73. *Phoebis sennae marcellina* (Cramer)—Clark, Lander, Nye N.
74. *Eurema mexicana* (Boisduval)—Clark, Eureka, Nye N.
75. *Eurema nicippe* (Cramer)—Clark, Lincoln, Nye S.
76. *Nathalis iole* Boisduval—Clark, Elko, Esmeralda, Eureka, Lander, Lincoln, Mineral, Nye N, Nye S, White Pine.

## LYCAENIDAE

- 77a. *Lycaena arota virginiensis* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Esmeralda, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 77b. *Lycaena arota schellbachi* (Tilden)—Lincoln, Nye N, White Pine.
- 78a. *Lycaena cupreus cupreus* (W. H. Edwards)—Douglas, Washoe.
- 78b. *Lycaena cupreus artemisia* Scott—Elko. The Great Basin phenotype was recently named by Scott (1981).
- 79a. *Lycaena editha editha* (Mead)—Carson City, Douglas, Humboldt, Lander, Storey, Washoe. Scott (1979) considered *editha* synonymous with *xanthoides* (Boisduval). I believe them to be no less than semispecies.
- 79b. *Lycaena editha nevadensis* Austin.—Elko, Humboldt. This phenotype is plainly distinct from that in western Nevada and was described by Austin (1984).
- 80a. *Lycaena rubidus rubidus* (Behr)—Humboldt, Washoe.
- 80b. *Lycaena rubidus sirius* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. Until the recent revision (Johnson & Balogh, 1977), most material from west of the Rocky Mountains (including Nevada) was referred to nominate *rubidus*.
- 80c. *Lycaena rubidus* nr. *monachensis* K. Johnson & Balogh—Esmeralda, Lyon.
81. *Lycaena heteronea heteronea* Boisduval—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
82. *Lycaena dorcas castro* (Reakirt)—Clark, Elko. Scott (1978a) argued that western members of this group are *helloides*. Whatever the case, certain Elko County populations are phenotypically distinct from *helloides*. I thus follow Ferris (1977) in treating these as a *dorcas* W. Kirby.
83. *Lycaena helloides* (Boisduval)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
- 84a. *Lycaena nivalis nivalis* (Boisduval)—Carson City, Douglas, Esmeralda, Humboldt, Washoe. The name *ianthe* (W. H. Edwards), described from Nevada material, is synonymous.
- 84b. *Lycaena nivalis browni* dos Passos—Elko, Lander.
85. *Hypaurotis crysalus crysalus* (W. H. Edwards)—Lincoln.
86. *Habrodais grunus grunus* (Boisduval)—Douglas, Washoe.



87. *Atlides halesus estesi* Clench—Clark, Douglas, Lincoln, Nye S. This seems to be the currently accepted name for western populations rather than *corcorani* dos Passos.
88. *Harkenclenus titus immaculosus* (W. P. Comstock)—Elko, Eureka, Humboldt, Lander, Lincoln, Nye N, Pershing, Washoe, White Pine. Western Nevada populations may be distinct enough to warrant recognition.
- 89a. *Satyrium behrii behrii* (W. H. Edwards)—Carson City, Churchill, Clark, Douglas, Esmeralda, Lander, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe.
- 89b. *Satyrium behrii crossi* (Field)—Elko, Eureka, Nye N, Lincoln, White Pine. Most eastern Nevada populations are darker and more heavily marked beneath and larger than Sierran material. These seem to represent *crossi*. Most specimens from Nye and Lander counties are large but pale beneath.
- 90a. *Satyrium fuliginosum fuliginosum* (W. H. Edwards)—Carson City, Douglas, Lyon, Mineral, Washoe.
- 90b. *Satyrium fuliginosum semiluna* Klots—Elko, Eureka, Humboldt.
- 91a. *Satyrium californica californica* (W. H. Edwards)—Elko, Eureka, Humboldt, Lander, Lincoln, Nye N, Pershing, Washoe, White Pine. This is the dark, non-Sierran phenotype which occurs over much of the state. It is similar to material from west of the Sierra Nevada and is thus included, for now, in that concept.
- 91b. *Satyrium californica cygnus* (W. H. Edwards)—Carson City, Douglas, Esmeralda, Lyon, Mineral, Storey, Washoe. Sierran material is sufficiently different from that in the rest of Nevada that the name *cygnus* is raised from synonymy.
- 92a. *Satyrium sylvinus sylvinus* (Boisduval)—Carson City, Churchill, Douglas, Esmeralda, Humboldt, Lyon, Pershing, Storey, Washoe. The subspecific assignments for this species are tentative at best until a thorough revisional study is undertaken. There appears to be considerable blending between phenotypes.
- 92b. *Satyrium sylvinus putnami* (Hy. Edwards)—Elko, Lander, Lincoln, Nye N, White Pine.
- 92c. *Satyrium sylvinus* (Boisduval) ssp.—Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe. This large, pale phenotype occurs in, mostly, the river valleys.
93. *Satyrium tetra* (W. H. Edwards)—Carson City, Douglas, Storey, Washoe. The name *adenostomatis* (Hy. Edwards) is apparently synonymous.
- 94a. *Satyrium saepium saepium* (Boisduval)—Carson City, Douglas, Storey, Washoe. The name *fulvescens* (Hy. Edwards) described from Lake Tahoe appears synonymous. At least four phenotypes of *saepium* occur in the state. Pending a review of the taxon, the listing herein represents the best fit to available names.
- 94b. *Satyrium saepium provo* (Watson & W. P. Comstock)—White Pine. Eastern Great Basin and Rocky Mountain populations are separable from those of the Sierras; this name then refers to the former.
- 94c. *Satyrium saepium* nr. *okanagana* (McDunnough)—Elko, Humboldt. These are very dark with high contrast beneath.
- 94d. *Satyrium saepium* (Boisduval) spp.—Lincoln. This is a distinctive insect (also known from Washington County, Utah) with low contrast beneath and broad white edgings on the submarginal markings.
95. *Ministrymon leda* (W. H. Edwards)—Clark, Elko, Lincoln, Nye N, Nye S.
96. *Callophrys dumetorum dumetorum* (Boisduval)—Douglas. The name *dumetorum* may actually refer to what is now called *viridis* (W. H. Edwards) whereby the name *perplexa* Barnes & Benjamin would apply to populations currently referred to *dumetorum* (*vide* J. F. Emmel).
97. *Callophrys affinis affinis* (W. H. Edwards)—Elko, Eureka, Humboldt, Lander, Lincoln, Nye N, White Pine. This taxon apparently intergrades with *dumetorum* further north (Scott & Justice, 1981); in fact the entire green *Callophrys* complex may represent a superspecies (*vide* J. F. Emmel).
98. *Callophrys comstocki* Henne—Clark, Esmeralda, Lincoln, Mineral, Nye N, Nye S.
99. *Callophrys lemberti* Tilden—Carson City, Churchill, Douglas, Elko, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe.

100. *Callophrys spinetorum spinetorum* (Hewitson)—Carson City, Churchill, Clark, Douglas, Elko, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, White Pine. All Nevada material is of the nominate race and not like the Rocky Mountain *ninus* (W. H. Edwards) (see Clench, 1981).
101. *Callophrys nelsoni nelsoni* (Boisduval)—Carson City, Douglas, Washoe.
- 102a. *Callophrys siva rhodope* (Godman & Salvin)—Clark, Lincoln, Nye S. Green populations from Nevada are much closer to this recently revived taxon (Clench, 1981) than to Colorado examples of nominate *siva* (W. H. Edwards) to which southern Nevada material has been heretofore referred (Austin & Austin, 1980). Clench (1981) referred one Clark County specimen to nominate *siva*; the population, however, is closer to *rhodope*.
- 102b. *Callophrys siva chalcosiva* Clench—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. This is the widespread, brown, Great Basin phenotype recently described (Clench, 1981).
- 103a. *Callophrys augustus iroides* (Boisduval)—Carson City, Douglas, Elko, Eureka, Humboldt, Pershing, Storey, Washoe.
- 103b. *Callophrys augustus*(?) (W. Kirby) ssp.—White Pine. A short series from the Snake Range either represents an undescribed *augustus* or *Callophrys mossii* (Hy. Edwards). It is tentatively placed in *augustus* but it somewhat resembles Sierran *mossii windi* (Clench). The latter taxon is considered separable from *fortis* based on pattern and, especially, biological differences.
104. *Callophrys fortis* (Strecker)—Clark, Esmeralda, Lincoln, Nye N, Nye S, White Pine.
105. *Callophrys eryphon eryphon* (Boisduval)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Storey, Washoe, White Pine.
- 106a. *Strymon melinus pudica* (Hy. Edwards)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Washoe, White Pine.
- 106b. *Strymon melinus setonia* McDunnough—Humboldt.
107. *Brephidium exilis* (Boisduval)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
108. *Leptotes marina* (Reakirt)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
109. *Hemiargus ceraunus gyas* (W. H. Edwards)—Clark, Lincoln, Nye N, Nye S, White Pine.
110. *Hemiargus isola alce* (W. H. Edwards)—Carson City, Clark, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, White Pine.
111. *Everes amyntula amyntula* (Boisduval)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
- 112a. *Celastrina ladon echo* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lyon, Mineral, Nye N, Pershing, Storey, Washoe. This and the next have long been specifically called *argiolus* (Linnaeus). It has been argued that *ladon* (Cramer) is probably correct for North American material (Clench & Miller, 1980).
- 112b. *Celastrina ladon cinerea* (W. H. Edwards)—Churchill, Clark, Lander, Lincoln, Nye N, Nye S, White Pine.
- 113a. *Euphilotes battoides glaucon* (W. H. Edwards)—Carson City, Douglas, Elko, Humboldt, Lyon, Mineral, Pershing, Storey, Washoe. The use of *Euphilotes* follows Mattoni (1977).
- 113b. *Euphilotes battoides baueri* (Shields)—Carson City, Churchill, Clark, Douglas, Esmeralda, Humboldt, Lander, Lincoln, Nye N, Nye S.
- 113c. *Euphilotes battoides intermedia* (Barnes & McDunnough)—Carson City, Douglas, Washoe.

- 113d. *Euphilotes battoides martini* (Mattoni)—Clark, Lincoln, Nye S.
- 113e. *Euphilotes battoides* nr. *bernardino* (Barnes & McDunnough)—Esmeralda, Eureka, Mineral, Nye N, White Pine.
- 113f. *Euphilotes battoides* (Behr) ssp.—Clark. This population is like the fall flying phenotype of the eastern Mojave Desert of California (Emmel & Emmel, 1973; Shields, 1975, 1977). It has been referred to as near *ellisi* (Shields).
- 113g. *Euphilotes battoides* (Behr) ssp.—White Pine. The Baking Powder Flat population is distinctive (see Shields, 1975).
- 113h. *Euphilotes battoides* (Behr) ssp.—Churchill, Lander, Lyon, Mineral. This entity flies in June and associates with *Eriogonum heermannii*. It has been variously referred to as near *ellisi* and near *bernardino*.
- 113i. *Euphilotes battoides* (Behr) ssp.—Nye S. A distinctive insect flying in July in the Grapevine Mountains (*vide* J. F. Emmel).
- 114a. *Euphilotes enoptes ancilla* (Barnes & McDunnough)—Churchill, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe.
- 114b. *Euphilotes enoptes enoptes* (Boisduval)—Carson City, Douglas, Lyon, Storey, Washoe.
- 114c. *Euphilotes enoptes dammersi* (J. A. Comstock & Henne)—Clark, Lincoln.
- 114d. *Euphilotes enoptes* (Boisduval) ssp.—Clark, Nye S. This dark and broad-margined phenotype in the Spring Mountains is undescribed.
- 114e. *Euphilotes enoptes* (Boisduval) ssp.—Esmeralda, Nye N. This phenotype, somewhat intermediate between *ancilla* and the Spring Mountains population, occurs in two areas, one in the White Mountains and the other in the Quinn Canyon Range.
- 115a. *Euphilotes mojave mojave* (Watson and W. P. Comstock)—Clark. I follow Mattoni (1977) in considering *mojave* as a distinct species.
- 115b. *Euphilotes mojave langstoni* (Shields)—Esmeralda, Mineral.
- 116a. *Euphilotes rita pallescens* (Tilden & Downey)—Churchill, Elko, Esmeralda, Nye N. This taxon is considered subspecies of *rita* (Barnes & McDunnough) after Mattoni (1977). The Sand Mountain population in Churchill County may be distinct.
- 116b. *Euphilotes rita elvirae* (Mattoni)—Carson City, Lyon, Mineral, Washoe. These populations were considered within the variation of *pallescens* by Shields (1977). I believe them closer to *elvirae* than to *pallescens*.
- 116c. *Euphilotes rita mattonii* (Shields)—Elko.
- 116d. *Euphilotes rita emmeli* (Shields)—Lincoln.
117. *Euphilotes spaldingi spaldingi* (Barnes & McDunnough)—Lincoln, White Pine. I follow Mattoni (1977) in retaining this as a separate species.
118. *Philotiella speciosa speciosa* (Hy. Edwards)—Churchill, Clark, Esmeralda, Lyon, Mineral, Nye N, Nye S, Pershing. The use of this genus follows Mattoni (1977).
- 119a. *Glaucoopsyche piasus piasus* (Boisduval)—Carson City, Douglas, Washoe. This species is undoubtedly a *Glaucoopsyche* as pointed out by Brown (1971).
- 119b. *Glaucoopsyche piasus nevada* F. M. Brown—Churchill, Elko, Esmeralda, Eureka, Lander, Lincoln, Lyon, Mineral, Nye N, White Pine. These were called *daunia* (W. H. Edwards) before *nevada* was described.
- 119c. *Glaucoopsyche piasus toxeuina* F. M. Brown—Douglas, Humboldt, Pershing, Washoe.
- 120a. *Glaucoopsyche lygdamus oro* (Scudder)—Churchill, Clark, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, White Pine.
- 120b. *Glaucoopsyche lygdamus columbia* (Skinner)—Carson City, Douglas, Humboldt, Lyon, Mineral, Storey, Washoe. The name *orus* (W. H. Edwards) may have been applied to Nevada material (see Brown, 1970b).
- 120c. *Glaucoopsyche lygdamus* (Doubleday) ssp.—Clark, Lincoln, Nye S. This is the large-spotted, desert phenotype with an *Astragalus* host.
121. *Plebejus idas anna* (W. H. Edwards)—Carson City, Douglas, Washoe. The name *argyrognomon* (Berstrasser) is considered synonymous (see News Lepid. Soc., 1983: 66).
- 122a. *Plebejus melissa melissa* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko,

- Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 122b. *Plebejus melissa fridayi* F. H. Chermock—Carson City, Douglas, Esmeralda, Mineral, Washoe.
- 122c. *Plebejus melissa* (W. H. Edwards) ssp.—Clark, Lincoln. This is the distinctive small phenotype of, at least, the Colorado River drainage.
- 123a. *Plebejus saepiolus gertschi* dos Passos—Elko, White Pine.
- 123b. *Plebejus saepiolus saepiolus* (Boisduval)—Carson City, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Storey, Washoe, White Pine.
- 123c. *Plebejus saepiolus* (Boisduval) ssp.—Esmeralda. This is an unnamed high elevation population in the White Mountains.
- 124a. *Plebejus icarioides fulla* (W. H. Edwards)—Carson City, Churchill, Clark, Douglas, Elko, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. This name is the earliest (*vide* J. F. Emmel) to refer to populations of Great Basin influence with nearly immaculate ventral hindwings (see Downey *in* Brown, 1970b). These have heretofore been called *ardea* (W. H. Edwards).
- 124b. *Plebejus icarioides* (Boisduval) ssp.—Clark, Nye S. The Spring Mountains population is distinctive. This was referred to as *evius* (Boisduval) by Austin and Austin (1980).
- 124c. *Plebejus icarioides* (Boisduval) ssp.—Esmeralda, Mineral. Certain populations in these two counties do not belong in any described taxon.
- 125a. *Plebejus shasta minnehaha* (Scudder)—Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, White Pine. Emmel and Shields (1978) suggested that *minnehaha* was a "catch all" name for several distinctive populations.
- 125b. *Plebejus shasta shasta* (W. H. Edwards)—Carson City, Washoe.
- 125c. *Plebejus shasta charlestonensis* Austin—Clark. This was recently described by Austin (1980).
- 126a. *Plebejus acmon lutzi* dos Passos—Elko, Humboldt, Pershing, White Pine.
- 126b. *Plebejus acmon texanus* Goodpasture—Clark, Esmeralda, Lander, Lincoln, Nye N, Nye S, White Pine.
- 126c. *Plebejus acmon acmon* (Westwood & Hewitson)—Carson City, Churchill, Clark, Douglas, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe.
- 127a. *Plebejus lupini lupini* (Boisduval)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 127b. *Plebejus lupini* nr. *monticola* (Clemence)—Clark, Nye S.
128. *Plebejus franklinii podarce* (C. & R. Felder)—Carson City, Douglas, Storey, Washoe. There is no general consensus as to the proper specific name for this insect (see Ferris & Brown, 1981; Miller & Brown, 1981). Previously, both *glandon* (de Prunner) and *aquilo* (Boisduval) have been used.

## RIODINIDAE

129. *Calephelis nemesis californica* McAlpine—Clark.
130. *Calephelis wrighti* Holland—Clark.
- 131a. *Apodemia mormo mormo* (C. & R. Felder)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine. There are, at least, three different *mormo* in Nevada. With the restriction of the type locality to near Pyramid Lake, Washoe County (Miller & Brown, 1981), the small, dark, univoltine (late summer), northern Nevada phenotype belongs here.
- 131b. *Apodemia mormo* nr. *deserti* Barnes & McDunnough—Clark, Esmeralda, Lincoln, Nye S. This is the small, pale, multivoltine (or at least vernal), desert associated phenotype. The insistence by Opler and Powell (1961) that it does not fall into

their conception of *deserti* prevents me from definitely placing it there as have others. I, however, can see no consistent differences.

- 131c. *Apodemia mormo* (C. & R. Felder) ssp.—Clark, Lincoln. This is a large, dark, fall univoltine which occurs at moderate elevations.
132. *Apodemia palmerii palmerii* (W. H. Edwards)—Clark, Lincoln, Nye S. The name *marginalis* (Skinner) is synonymous, but this phenotype differs from that further east.

## LIBYTHEIDAE

133. *Libytheana bachmanii larvata* (Strecker)—Clark, Lincoln.

## HELICONIIDAE

134. *Agraulis vanillae incarnata* (Riley)—Clark.

## NYMPHALIDAE

135. *Euptoieta claudia* (Cramer)—Churchill, Clark, Lincoln, Nye N, White Pine.
- 136a. *Speyeria cybele leto* (Behr)—Carson City, Douglas, Lyon, Washoe.
- 136b. *Speyeria leto letona* dos Passos & Grey—White Pine.
- 137a. *Speyeria nokomis nokomis* (W. H. Edwards)—Elko, White Pine. The Ruby Valley population is somewhat intermediate towards *apacheana*. Ferris and Fisher (1971) discussed the blending of *nokomis* and *apacheana* across Utah.
- 137b. *Speyeria nokomis apacheana* (Skinner)—Carson City, Douglas, Lander, Lincoln, Lyon, Mineral, Nye N, Washoe, White Pine.
138. *Speyeria coronis snyderi* (Skinner)—Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Nye N, Pershing, Storey, Washoe, White Pine. Nevada specimens were referred to nominate *coronis* (Behr) by Edwards (1897) before *snyderi* was described. Material from the Sierra Nevada and associated ranges is smaller with a browner disc and may be more closely associated with *simaetha* dos Passos & Grey.
- 139a. *Speyeria zerene zerene* (Boisduval)—Carson City, Douglas, Washoe.
- 139b. *Speyeria zerene malcolmi* (J. A. Comstock)—Douglas, Mineral, Storey.
- 139c. *Speyeria zerene carolae* (dos Passos & Grey)—Clark.
- 139d. *Speyeria zerene platina* (Skinner)—Elko, Nye N, White Pine.
- 139e. *Speyeria zerene gunderi* (J. A. Comstock)—Churchill, Elko, Eureka, Humboldt, Lander, Nye N, Pershing, Washoe, White Pine. The types of *gunderi* are of an undoubted *zerene*. The taxon *cynna* dos Passos & Grey is considered a synonym (see Grey, 1975).
- 140a. *Speyeria callippe nevadensis* (W. H. Edwards)—Carson City, Douglas, Elko, Humboldt, Lyon, Mineral, Storey, Washoe.
- 140b. *Speyeria callippe harmonia* dos Passos & Grey—Churchill, Elko, Eureka, Lander, Lincoln, Nye N, Pershing, White Pine.
- 141a. *Speyeria egleis egleis* (Behr)—Carson City, Douglas, Mineral, Washoe.
- 141b. *Speyeria egleis linda* (dos Passos & Grey)—Elko, Humboldt(?).
- 141c. *Speyeria egleis utahensis* (Skinner)—Elko, Eureka, White Pine.
- 141d. *Speyeria egleis toyabe* Howe—Lander, Nye N.
- 142a. *Speyeria atlantis greyi* (Moeck)—Elko.
- 142b. *Speyeria atlantis elko* Austin.—Elko. Populations of the *dodgei* (Gunder) cline occur in the northern portion of the county. These have been variously referred to as near *irene* (Boisduval) or near *dodgei*. It was described by Austin (1983).
- 143a. *Speyeria mormonia mormonia* (Boisduval)—Carson City, Douglas, Washoe. The restriction of the type locality of *mormonia* to western Nevada (Miller & Brown, 1981) seems reasonable. This relegates *arge* (Strecker), the name previously applied to Nevada material, to synonymy. The synonym *montivaga* (Behr) has also been applied to Nevada material (Holland, 1931).
- 143b. *Speyeria mormonia artonis* (W. H. Edwards)—Elko, White Pine.

144. *Poladryas arachne arachne* (W. H. Edwards)—Clark, Lincoln, Nye N, Nye S, White Pine.
- 145a. *Chlosyne leanira cerrita* (W. G. Wright)—Clark, Esmeralda, Lincoln, Nye S. A new name might be needed for these populations as *cerrita* was named from a mixed population.
- 145b. *Chlosyne leanira alma* (Strecker)—Carson City, Churchill, Douglas, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
146. *Chlosyne californica* (W. G. Wright)—Clark, Lincoln.
147. *Chlosyne lacinia crocale* (W. H. Edwards)—Clark.
- 148a. *Chlosyne palla* (Boisduval) ssp.—Carson City, Douglas, Storey, Washoe. This phenotype has been called *whitneyi* (Behr). Recent investigations have indicated that the insect described as *whitneyi* is actually what we have known as *damoetas* (Skinner) (*vide* J. F. Emmel). Thus the Sierra Nevada *palla* is without a name.
- 148b. *Chlosyne palla vallismortis* (J. W. Johnson)—Clark, Nye S. This may actually be closer to *acastus* or a valid species in itself (*vide* J. F. Emmel).
149. *Chlosyne acastus acastus* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
150. *Chlosyne neumoegei neumoegei* (Skinner)—Clark, Esmeralda, Lincoln, Nye S.
151. *Chlosyne hoffmanni hoffmanni* (Behr)—Carson City, Washoe.
152. *Phyciodes texana texana* (W. H. Edwards)—Clark.
153. *Phyciodes phaon* (W. H. Edwards)—Clark.
- 154a. *Phyciodes tharos distincta* Bauer—Clark.
- 154b. *Phyciodes tharos* nr.(?) *pascoensis* (W. G. Wright)—Elko, White Pine.
- 155a. *Phyciodes pratensis pratensis* (Behr)—Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Nye N, Pershing, Washoe.
- 155b. *Phyciodes pratensis montana* (Behr)—Carson City, Douglas, Lyon, Mineral, Washoe.
- 155c. *Phyciodes pratensis camillus* W. H. Edwards—Elko, Eureka, Lincoln, Nye N, White Pine.
- 155d. *Phyciodes pratensis* (Behr) ssp.—Elko, Eureka, Humboldt, Lander. This is a very pallid phenotype from the Humboldt River Valley.
156. *Phyciodes orseis herlani* Bauer—Carson City, Douglas, Washoe.
157. *Phyciodes pallida barnesi* Skinner—Clark, Elko, Eureka, Lincoln, Nye N, White Pine.
158. *Phyciodes mylitta mylitta* (W. H. Edwards)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 159a. *Euphydryas anicia alena* Barnes & Benjamin—Clark, Lincoln. The taxa *anicia* (Doubleday & Hewitson) and *colon* (W. H. Edwards) were synonymized with *chalcedona* (Doubleday) by Scott (1978b). I treat them as, at least, semispecies.
- 159b. *Euphydryas anicia macyi* Fender & Jewett—Humboldt.
- 159c. *Euphydryas anicia morandi* Gunder—Clark.
- 159d. *Euphydryas anicia veazieae* Fender & Jewett—Humboldt, Washoe.
- 159e. *Euphydryas anicia wheeleri* (Hy. Edwards)—Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, White Pine.
- 160a. *Euphydryas chalcedona kingstonensis* T. & J. Emmel—Clark.
- 160b. *Euphydryas chalcedona macglashanii* (Rivers)—Carson City, Douglas, Lyon, Storey, Washoe. The name *truckeensis* Gunder, ascribed to our fauna (Martin & Truxal, 1955), is synonymous.
- 161a. *Euphydryas colon nevadensis* Bauer—Elko.
- 161b. *Euphydryas colon wallacensis* Gunder—Washoe.
- 162a. *Euphydryas editha aurilacus* Gunder—Washoe. This population has previously been referred to *nubigena* (Behr).
- 162b. *Euphydryas editha hutchinsi* McDunnough—Elko.
- 162c. *Euphydryas editha lehmani* Gunder—Elko, Eureka, Lander, Lincoln, Nye N, White Pine. The name *caverna* Gunder is based on an aberration from Nevada.

- 162d. *Euphydryas editha monoensis* Gunder—Carson City, Douglas, Washoe.
- 162e. *Euphydryas editha koreti* Murphy & Ehrlich—Lander, White Pine. The high elevation populations of the Toiyabe, Snake and Schell Creek ranges are distinctive and were described by Murphy and Ehrlich (1983).
- 162f. *Euphydryas editha* (Boisduval) ssp.—Washoe. This undescribed phenotype is like certain low elevation Modoc County, California material. This may or may not be what is referred to as *edithana* (Strand) in northwestern Nevada (Bauer *in* Howe, 1975).
163. *Polygonia satyrus satyrus* (W. H. Edwards)—Carson City, Clark, Douglas, Elko, Eureka, Lander, Lincoln, Lyon, Nye N, Washoe, White Pine.
164. *Polygonia zephyrus* (W. H. Edwards)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
165. *Nymphalis californica californica* (Boisduval)—Carson City, Churchill, Clark, Douglas, Elko, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
166. *Nymphalis antiopa antiopa* (Linnaeus)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
167. *Nymphalis milberti furcillata* (Say)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
168. *Vanessa virginiensis* (Drury)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
169. *Vanessa cardui* (Linnaeus)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
170. *Vanessa annabella* (Field)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine. The name *carye* (Hübner) was previously misapplied to this taxon.
171. *Vanessa atalanta rubria* (Fruhstorfer)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
172. *Precis coenia* (Hübner)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
- 173a. *Limenitis archippus* nr. *archippus* (Cramer)—Elko. The Little Salmon River population is somewhat intermediate towards *lahontani* but is closest to the nominate.
- 173b. *Limenitis archippus obsoleta* W. H. Edwards—Clark. It appears that *hulstii* W. H. Edwards is insufficiently different to warrant recognition. If valid, the latter would apply to Nevada material.
- 173c. *Limenitis archippus lahontani* Herlan—Churchill, Elko, Eureka, Humboldt, Lander, Lyon, Pershing, Storey, Washoe.
- 174a. *Limenitis weidemeyerii latifascia* E. M. & S. F. Perkins—Churchill, Elko, Eureka, Humboldt, Lander, Mineral, Nye N, Pershing, White Pine.
- 174b. *Limenitis weidemeyerii nevadae* (Barnes & Benjamin)—Clark.
- 174c. *Limenitis weidemeyerii angustifascia* (Barnes & Benjamin)—Clark, Lincoln.
175. *Limenitis lorquini eavesii* Hy. Edwards—Carson City, Churchill, Douglas, Esmeralda, Humboldt, Lyon, Mineral, Storey, Washoe. This species hybridizes with *L. weidemeyerii latifascia* (not *nevadae*, *contra* Miller & Brown, 1981); the hybrid was named “fridayi” Gunder. These are known from Churchill, Elko, Humboldt and Mineral counties. Western Great Basin populations are distinct from nominate *lorquini* and fit the concept of *eavesii*. In the Pine Forest Range (Humboldt County), the population is largely “fridayi” and the *lorquini* appears to be of the subspecies *burrisoni* Maynard.
176. *Adelpha bredowii eulalia* (Doubleday & Hewitson)—Clark, Lincoln, White Pine.

All U.S. records (including Nevada, Holland, 1931) were once included in *californica* (Butler).

## APATURIDAE

177. *Asterocampa celtis montis* (W. H. Edwards)—Clark. I have seen no evidence to maintain the multitude of monotypic species in this genus.

## SATYRIDAE

178. *Cyllopsis pertepida dorothea* (Nabokov)—Clark, Lincoln. Use of *Cyllopsis* follows the review by Miller (1974).
- 179a. *Coenonympha ochracea mono* Burdick—Douglas, Lyon, Mineral. This, *ampelos* and *california* are members of the *tullia* (Muller) superspecies.
- 179b. *Coenonympha ochracea* W. H. Edwards ssp.—Clark, Elko, Eureka, Lander, Lincoln, Nye N, White Pine. The name *brenda* W. H. Edwards has often been misapplied (e.g., Brown, 1964), as has the nominate (e.g., Holland, 1931) to the heavily ocellated Great Basin phenotype; *brenda* appears synonymous with *california* (fide R. E. Gray; also dos Passos, 1964).
- 180a. *Coenonympha ampelos ampelos* W. H. Edwards—Carson City, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Nye N, Storey, Washoe.
- 180b. *Coenonympha ampelos elko* W. H. Edwards—Elko, Eureka, Humboldt, Lander, White Pine.
181. *Coenonympha californica californica* Westwood—Clark.
- 182a. *Cercyonis pegala gabbii* (W. H. Edwards)—Carson City, Douglas. These populations are often referred to as *ariane* (Boisduval). The latter refers to certain populations west of the Sierra Nevada. The name *gabbii* may (or may not) apply to this western Great Basin material.
- 182b. *Cercyonis pegala stephensi* (W. G. Wright)—Humboldt, Washoe. The name *blanca* T. Emmel & Mattoon is a synonym.
- 182c. *Cercyonis pegala* (Fabricius) ssp.—Elko, Eureka, Humboldt, Lander, Lyon, Mineral(?), Pershing, White Pine. The central Great Basin populations are a distinct entity. The populations in Lyon and Mineral counties are similar but may not be properly placed here.
- 183a. *Cercyonis sthenele paulus* (W. H. Edwards)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 183b. *Cercyonis sthenele masoni* Cross—Clark, Lincoln, Nye N, Nye S. This phenotype, closest to *masoni*, extends into the desert areas of California and may warrant taxonomic recognition.
- 184a. *Cercyonis oetus oetus* (Boisduval)—Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Pershing, Storey, Washoe, White Pine.
- 184b. *Cercyonis oetus pallescens* T. & J. Emmel—Lander, Nye N. This taxon, described by Emmel and Emmel (1971), was omitted in Miller and Brown (1981).
- 185a. *Neominois ridingsii stretchii* (W. H. Edwards)—Elko, Eureka, Humboldt, Lander, Nye N, Washoe, White Pine.
- 185b. *Neominois ridingsii dionysus* Scudder—Elko, Nye N, White Pine.
- 185c. *Neominois ridingsii* (W. H. Edwards) ssp.—Esmeralda, Lyon, Mineral. This is the pale, western Great Basin population described by Austin (in press). The occurrence of the nominate subspecies in Nevada (Emmel in Howe, 1975) is incorrect.
186. *Oeneis ivallda* (Mead)—Carson City, Washoe.
187. *Oeneis chryxus chryxus* (Doubleday & Hewitson)—Elko, Lincoln, White Pine.

## DANAIDAE

188. *Danaus plexippus plexippus* (Linnaeus)—Carson City, Churchill, Clark, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, Storey, Washoe, White Pine.
189. *Danaus gilippus strigosus* (Bates)—Carson City, Churchill, Clark, Douglas, Elko,



Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye N, Nye S, Pershing, White Pine.

### DUBIOUS AND HYPOTHETICAL RECORDS

A number of taxa have been reported for Nevada which are unlikely or represent misdeterminations. Others range nearly to the borders of the state and may be expected to occur. These are commented upon below. Taxa reported but now considered synonymous with those occurring in the state are discussed above in the main species accounts.

*Erynnis brizo lacustra* (W. G. Wright)—The reported record (Martin & Truxal, 1955) undoubtedly refers to *burgessi*.

*Hesperia comma oregonia* (W. H. Edwards)—The type series was supposedly taken in Nevada and there are specimens labeled such in Edwards' collection in the Carnegie Museum, Pittsburgh, Pennsylvania (see Brown & Miller, 1977). These probably led to the subsequent listing of the taxon for Nevada (Lindsey, 1921; Lindsey et al., 1931). This subspecies does not occur in the state.

*Hesperia pawnee* Dodge—MacNeill (1964) mentioned seeing an, undoubtedly mislabeled, male labeled "Nevada."

*Hesperia viridis* (W. H. Edwards)—A specimen in the Snow Entomological Museum, University of Kansas, Lawrence, is labeled "Verdi, Nevada, July, 1903" (MacNeill, 1964; Brown & Miller, 1977). It is undoubtedly mislabeled.

*Ochlodes sylvanoides pratincola* (Boisduval)—A worn Nevada specimen taken to be this taxon was figured by Holland (1931). It probably is nominate *sylvanoides*.

*Ochlodes agricola* (Boisduval)—Specimens listed in the Nevada State Museum catalog for Clark and Elko counties are unlocatable. Undoubtedly these represent a misdetermination of some other taxon. Specimens from the W. H. Edwards collection from Nevada (Irwin, 1966) are probably mislabeled.

*Poanes taxiles* (W. H. Edwards)—The taxon has been listed for the state on several occasions (e.g., Edwards, 1881; Lindsey, 1921; Lindsey et al., 1931; MacNeill in Howe, 1975; Pyle, 1981). Three specimens labeled Nevada are in the W. H. Edwards collection at the Carnegie Museum, Pittsburgh, Pa. (Brown & Miller, 1980). There are no recent, verifiable records for the state but it occurs into western Utah and may be found eventually in one or more of the eastern Nevada counties.

*Paratrytone melane melane* (W. H. Edwards)—Nevada, in error, was included as the type locality (see Brown & Miller, 1980). The species is unknown in the state.

*Amblyscirtes eos* (W. H. Edwards)—The one report for Clark County (1972, Lepid. Soc. Season Summary) represents a misdetermination of *Pholisora alpheus* (fide J. F. Lesser).

*Amblyscirtes vialis* (W. H. Edwards)—Holland (1931) stated the range as including Nevada. I do not know of any records for the state although it occurs not too far away in the Sierra Nevada of California (Shapiro et al., 1979).

*Parnassius clodius sol* Bryk & Eisner—The type locality was listed as "Nevada"; this is probably more properly the Sierra Nevada somewhere in California. This taxon is not known from Nevada.

*Parnassius phoebus behrii* W. H. Edwards—Brown (1975b) mentioned a total of seven specimens in the W. H. Edwards collection at the Carnegie Museum labeled Nevada. There are no recent records and the above may represent mislabeling although the taxon occurs close to the Nevada line in the Sierra Nevada.

*Papilio indra fordii* J. A. Comstock & Martin—Tyler's (1975) inclusion of this taxon for Nevada is erroneous (probably based on 1963, Lepid. Soc. Season Summary). The record undoubtedly refers to the *panamintinus*-like populations in the Spring Mountains.

*Neophasia menapia tau* (Scudder)—The Caron Range population (Herlan, 1962) is not of this subspecies but of the nominate.

*Euchloe hyantis hyantis* (W. H. Edwards)—The recorded occurrence (1967, Lepid. Soc. Season Summary; see also Brown, 1973) refers to *lotta*.

*Anthocharis sara sara* Lucas—This has been incorrectly included in the Carson Range list (Herlan, 1962) as the form "reakirtii" W. H. Edwards. Two specimens of this taxon labeled "Mineral County" are in the Nevada State Museum. They are regarded as mislabeled as they do not, in any way, resemble material from nearby.

*Anthocharis sara inghami* Gunder—This and *thoosa* have been confused leading to the erroneous use of the former in the Nevada literature (1969, Lepid. Soc. Season Summary).

*Colias occidentalis chrysomelas* Hy. Edwards—The report for the Carson Range (Herlan, 1962) is unverified and undoubtedly represents a misdetermination.

*Lycaena xanthoides xanthoides* (Boisduval)—This species does not occur in Nevada; the Carson Range record (Herlan, 1962) is an undoubted misdetermination.

*Lycaena gorgon* (Boisduval)—I do not know the basis for Holland's (1931) inclusion of this species for Nevada.

*Lycaena mariposa mariposa* (Reakirt)—This species is reported as occurring in Nevada by Opler (in Howe, 1975). I know of no records.

*Satyrium acadica coolinensis* (Watson & W. P. Comstock)—The supposed Nevada record (Herlan, 1962) is a misidentification of, probably, *californica*.

*Satyrium sylvinus dryope* (W. H. Edwards)—A pair labeled *dryope* collected in "Nevada" by Morrison are in Edwards' collection at the Carnegie Museum (Brown, 1970a). These are either mislabeled or represent tailless individuals from a normally tailed Nevada population.

*Callophrys sheridanii* (W. H. Edwards)—Pyle (1981) reported *sheridanii* for southern Nevada. He treated this taxon as specifically distinct from both *comstocki* and *lemberti*. In this sense, *sheridanii* is unverified for Nevada.

*Callophrys mossii windi* (Clench)—This butterfly is in the Sierra Nevada not far from the Nevada line (fide D. L. Bauer). It may occur in association with its *Sedum* foodplant in, especially, the Mt. Rose area of Washoe County.

*Everes comyntas* (Godart)—This was reported for Nye County (1969, Lepid. Soc. Season Summary). All Nevada *Everes* seem to be *amyltula*.

*Glaucopsyche piasus sagittigera* (C. & R. Felder)—Brown (1975a) placed a single Humboldt County specimen in this taxon. More extensive material from this area shows these to be *toxema*.

*Glaucopsyche lygdamus incognitus* Tilden—The Nevada occurrences (Martin & Truxal, 1955; Herlan, 1962) as *behrii* (W. H. Edwards) probably represent *columbia*.

*Plebejus icarioides lycea* (W. H. Edwards)—The Carson Range report (Herlan, 1962) is of *fulla*.

*Plebejus icarioides icarioides* (Boisduval)—Two names associated with this subspecies have been ascribed to Nevada. The first is *mintha* (W. H. Edwards) of which the types were originally stated as being from Nevada but later corrected to California (see Brown, 1970b). The other, *fulla* (W. H. Edwards), has been synonymized with nominate *icarioides* (e.g., dos Passos, 1964; Miller & Brown, 1981). This, however, is the senior synonym of the widespread Great Basin subspecies previously called *ardea*.

*Speyeria nokomis nitocris* (W. H. Edwards)—This taxon was erroneously reported for Nevada (Edwards, 1897; dos Passos & Grey, 1947).

*Speyeria zerene conchyliatus* (J. A. Comstock)—Variation among the blending *zerene* populations east of Lake Tahoe produces occasional specimens resembling this subspecies (e.g., Herlan, 1962). The variation is best referred to the nominate subspecies. The Sierran influence seen in some individuals from northwestern Washoe County is due to introgression from *conchyliatus*.

*Speyeria callippe juba* (Boisduval)—This taxon was included for Nevada as *inornata* (W. H. Edwards) by Holland (1931) and dos Passos and Grey (1947), both probably following Edwards (1884). I know of no records although it does occur in the Sierra Nevada not far to the west (Shapiro et al., 1979).

*Speyeria callippe laura* (W. H. Edwards)—The types of this subspecies were reported

from Nevada (Edwards, 1879). Nothing like it has turned up in the state since. The name probably applies to something further west in California.

*Speyeria atlantis irene* (Boisduval)—Moeck (1957) reported *irene* on Verdi Peak north of Lake Tahoe near the Nevada line. It may occur east of here in Washoe County.

*Boloria epithore sierra* E. Perkins—The species occurs in the vicinity of South Lake Tahoe, Eldorado County, California (*vide* D. L. Bauer). It may occur in adjacent Douglas County.

*Chlosyne leanira wrightii* (W. H. Edwards)—Holland (1931) erroneously included Nevada in the range of this taxon.

*Chlosyne gabbi* (Behr)—Higgins (1960) reported a specimen of this species labeled "Nord Nevada." It is undoubtedly mislabeled.

*Chlosyne whitneyi whitneyi* (Behr)—This has been long known as *damoetas* (Skinner) (see comment under *palla* in main species accounts). The species occurs in the Sierra Nevada and Sweetwater Mountains in California. It may also be in adjacent Nevada.

*Dymasia dymas chara* (W. H. Edwards)—A specimen in the Allyn Museum of Entomology, Sarasota, Florida is mislabeled Elko County (*vide* E. M. Perkins). The correct data are Pima County, Arizona, and the above museum has been so notified.

*Phyciodes picta* (W. H. Edwards)—This species was erroneously listed for Nevada (1964, Lepid. Soc. Season Summary). There are no records for the state.

*Phyciodes pallida pallida* (W. H. Edwards)—This taxon was reported from Nevada as *mylitta mata* (Reakirt) (1963, Lepid. Soc. Season Summary). This undoubtedly represents *barnesi*.

*Euphydryas chalcedona olancha* (W. G. Wright) and *sierra* (W. G. Wright)—Holland (1931) and Scott (1978b) used these names for the variation in Nevada *macglashanii*. Comstock (1937) referred to central Nevada material (apparently *wheeleri*) as *sierra*.

*Polygonia faunus rusticus* (W. H. Edwards)—This species has been taken a very short distance from the Nevada line near South Lake Tahoe, Eldorado County, California (*vide* D. L. Bauer) and will probably eventually be recorded in Douglas County.

*Polygonia oreas silenus* (W. H. Edwards)—Ferris and Brown (1981) showed an unverified record for Elko County. This represents a misdetermined *zephyrus* (*vide* R. L. Langston).

*Precis evarete* (Cramer)—The report for Nevada (Herlan, 1962 as *orithya evarete*) refers to *coenia*.

*Coenonympha ampelos columbiana* McDunnough—Nevada nominate *ampelos* have been erroneously referred to this taxon (Herlan, 1962; 1964, Lepid. Soc. Season Summary).

*Cercyonis pegala wheeleri* (W. H. Edwards)—The types for the synonymous *hoffmani* (Strecker) were reported as from "Owens Lake, Nevada." This locality is actually in California.

*Cercyonis sthenele silvestris* (W. H. Edwards)—The occurrence in Nevada (Herlan, 1962) refers to *paulus*.

*Oenesis nevadensis nevadensis* (C. & R. Felder)—Martin and Truxal (1955) and Emel (*in* Howe, 1975) reported this species for Nevada. I know of no definite records.

I have been unable to verify a number of possible county records listed in the Harjes (1980) checklist. These are listed below. Some are unlikely or are known misdeterminations and, the county is set in italics, and many are commented upon. Others are probable and are listed mostly without comment.

*Hesperia nevada*—*Esmeralda* (misdetermined *uncas*, NSM).

*Helopetes ericetorum*—Washoe.

*Pyrgus ruralis*—Carson City.

*Erynnis propertius*—*Lyon* (misdetermined *pacuvius*, NSM).

*Thorybes mexicana*—*White Pine* (misdetermined *Erynnis telemachus*, NSM).

*Papilio bairdii*—*Washoe* (misdetermined *zelicaon*, NSM).

*Nathalis iole*—Douglas.

*Lycaena nivalis*—*Churchill* (misdetermined *helooides*, NSM).

*Habrodais grunus*—Clark (typographical error, should be Douglas).  
*Callophrys spinetorum*—Storey.  
*Callophrys nelsoni*—Elko, Lyon, Nye (misdetermined *siva*, NSM, etc.).  
*Callophrys dumetorum*—Storey (misdetermined *lemberti*, Bauer).  
*Plebejus idas*—Mineral (misdetermined *melissa*, NSM).  
*Libytheana bachmanii*—Storey.  
*Limenitis weidemeyerii*—Carson City, Washoe.  
*Limenitis lorquini*—White Pine.  
*Polygona satyrus*—Storey (misdetermined *zephyrus*, NSM).  
*Chlosyne lacinia*—Lander.  
*Euphydryas chalcedona*—Churchill, Elko, Eureka, Lander, Nye (correct only if *anicia* is considered a *Chalcedona*, see Scott, 1978b).  
*Euphydryas editha*—Churchill.  
*Danaus gilippus*—Washoe.  
*Coenonympha californica*—Humboldt (partially mislabeled California specimen, NSM).  
*Neominois ridingsi*—Douglas.

There are an additional five county records that are erroneous or unverified in any way:

*Hesperia pahaska*—White Pine (Ferris & Brown, 1981). This is possible, but there are no verified records to date.  
*Chlosyne palla*—Elko (Ferris & Brown, 1981). Unverified and probably refers to *acastus*.  
*Limenitis lorquini*—Elko, White Pine (Ferris & Brown, 1981). The White Pine record is totally erroneous; the Elko record undoubtedly refers to "fridayi" specimens which occasionally turn up.  
*Cercyonis oetus*—Clark (1974, Lepid. Soc. Season Summary). Undoubtedly this refers to *sthenele*.

Other Clark County *dubia* are listed in Austin and Austin (1980).

## DISCUSSION

To date, 189 species and some 300 total taxa of butterflies are known from the state of Nevada (Table 1). In general, counties with a portion of the Sierra Nevada in western Nevada, the four counties on the eastern border and the huge Nye County show the greatest diversity. Some of this is real; some is undoubtedly due to insufficient collecting. In addition, there are a number of areas within the state that have received little or no study. These include, but are not limited to, the following:

- 1) the northeastern and southeastern portions of Elko County.
- 2) Elko and Humboldt counties between the Independence and Santa Rosa ranges.
- 3) western Humboldt County west of the Santa Rosa Range.
- 4) eastern and western Pershing County.
- 5) extreme northern Washoe County.
- 6) much of Churchill County outside the Clan Alpine Range and the Fallon area.
- 7) Lander County between U.S. 50 and I-80.
- 8) northwestern quarter of White Pine County.
- 9) northern Nye County except the region from the Toiyabe Range to the Monitor Range.

- 10) southern Nye County (most of this is due to the presence of the Nevada Test Site which is off limits to the average collector; there are still fringe areas which can be studied).
- 11) western half of Lincoln County.
- 12) Mineral County except the Wassuk Range.
- 13) Esmeralda County except the White Mountains.

Some of these areas appear important as blend zones between taxa or may represent the distributional limits of others.

What is as important as filling in the distributional holes in Nevada is a more thorough knowledge of the fauna of adjacent regions. A start on this is Dornfeld's (1980) work on Oregon butterflies. The distribution and taxonomy of the butterflies of the other bordering states (Arizona, California, Idaho, Utah) are in various stages of study and updating. Once completed, we should have a picture of the influence of surrounding regions on the butterflies of Nevada specifically and the Great Basin in general.

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